

699-50-59 (C4882) Log Data Report

Borehole Information:

Borehole: 699-50-59 (C4882)		Site: Not available			
Coordinates (WA St Plane)		GWL¹ (ft): 167.2		GWL Date: 09/13/05	
North Not available	East Not available	Drill Date 09/05	Ground Level Elevation Not available	Total Depth (ft) 173.2	Type Becker

Casing Information:

Casing Type	Stickup (ft)	Outer Diameter (in.)	Inside Diameter (in.)	Thickness (in.)	Top (ft)	Bottom (ft)
Steel	1.75	6.24	6.0	0.12	1.75	167.2
Steel	N/A	9.0	8.0	0.50	N/A	167.2

Borehole Notes:

The Becker drilling system uses a dual-wall casing. Air flows down the annulus and cuttings are returned inside the inner casing. Total wall thickness is 0.620 in., increasing to 1.115 in. at the casing joints that occur at 10-ft intervals. The casing dimensions are derived from published values for Becker drill casing. Logging data acquisition is referenced to the ground surface.

Logging Equipment Information:

Logging System: Gamma 1E		Type: SGLS (70%) SN:34TP40587A
Effective Calibration Date: 03/04/05	Calibration Reference: DOE/EM-GJ864-2005	
Logging Procedure: MAC-HGLP 1.6.5, Rev. 0		

Spectral Gamma Logging System (SGLS) Log Run Information:

Log Run	1	2 Repeat			
Date	09/14/05	09/14/05			
Logging Engineer	Spatz	Spatz			
Start Depth (ft)	170.0	30.0			
Finish Depth (ft)	0.0	10.0			
Count Time (sec)	50	50			
Live/Real	R	R			
Shield (Y/N)	N	N			
Sample interval (ft)	1.0	1.0			
ft/min	N/A ²	N/A			
Pre-Verification	AE109CAB	AE109CAB			
Start File	AE109000	AE109171			
Finish File	AE109170	AE109191			

Log Run	1	2 Repeat			
Post-Verification	AE109CAA	AE109CAA			
Depth Return Error (in.)	+1	0			
Comments	No fine gain adjustment.	No fine gain adjustment.			

Logging Operation Notes:

Logging was conducted with a centralizer on the sonde and measurements are referenced to ground surface. Logging was terminated approximately 3 ft below the end of the casing (167.2 ft) at 170 ft. A repeat section was collected in this borehole to evaluate system performance.

Analysis Notes:

Analyst:	Henwood	Date:	11/30/05	Reference:	GJO-HGLP 1.6.3, Rev. 0
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Pre-run and post-run verifications for the logging system were performed before and after data acquisition. Acceptance criteria were met.

Casing thickness (additive for the 6- and 9-in. casings) is approximately 0.620 in. The combined thickness at casing joints is 1.115 in. This thickness results in a significant reduction in gamma activity detection as the detector passes by a casing joint. However, it is not practical to correct individual data points for the effect of casing joints. The influence of the thick joints is apparent on the total gamma where reduced count rates are exhibited at approximately 10-ft depth intervals.

SGLS spectra were processed in batch mode using APTEC SUPERVISOR to extract the total gamma count rate from individual files. No corrections are made for dead time, casing, or water.

Log Plot Notes:

Log plots are provided for the total gamma and dead time. A repeat log section is also presented.

Results and Interpretations:

A decrease in gamma activity occurs at each casing joint, where the increase in wall thickness results in greater attenuation of gamma activity. No anomalous gamma activity was observed. This observation suggests no significant concentrations of man-made radionuclides.

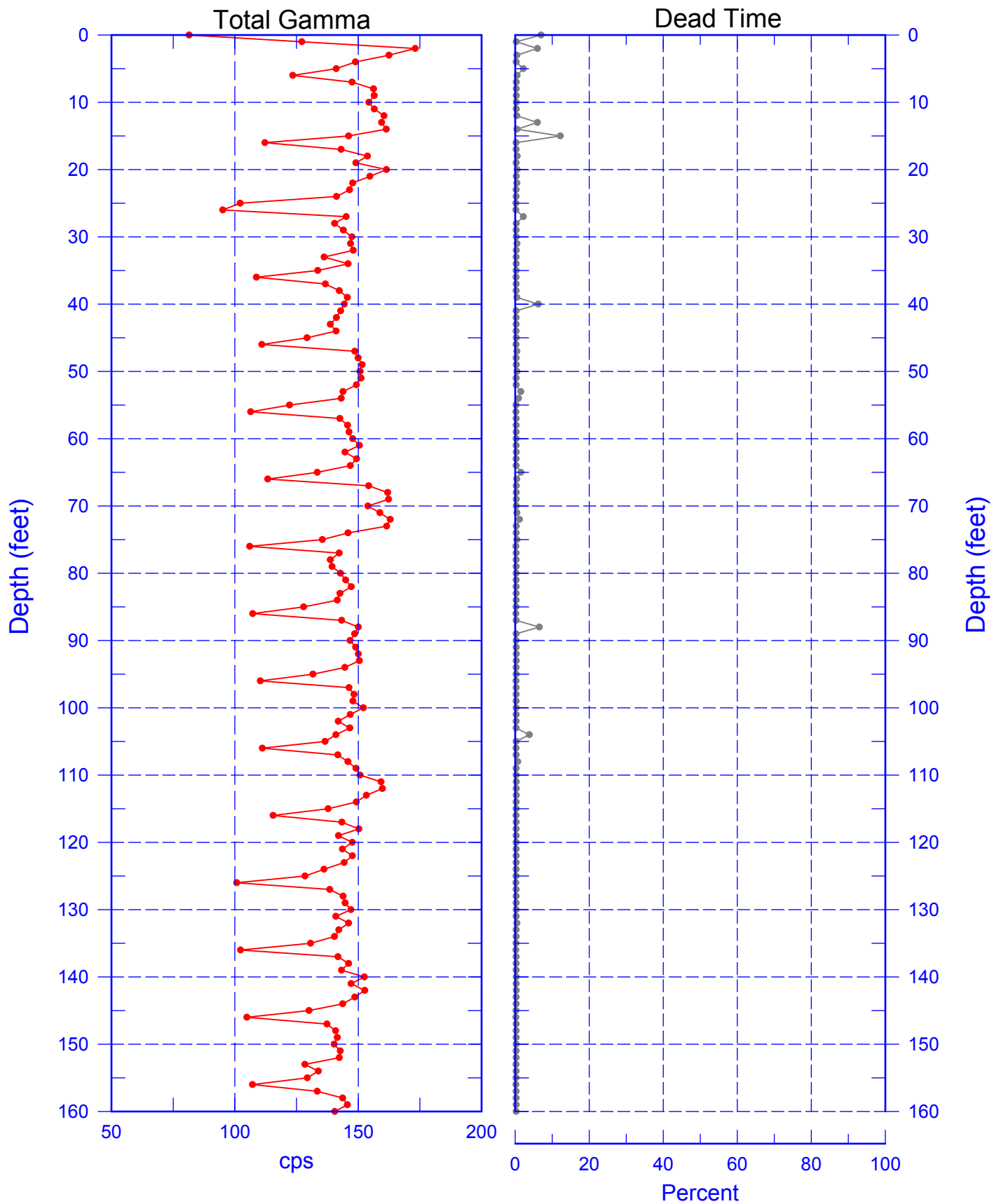
The repeat section indicated good agreement of the total count rate.

¹ GWL – groundwater level

² N/A – not applicable

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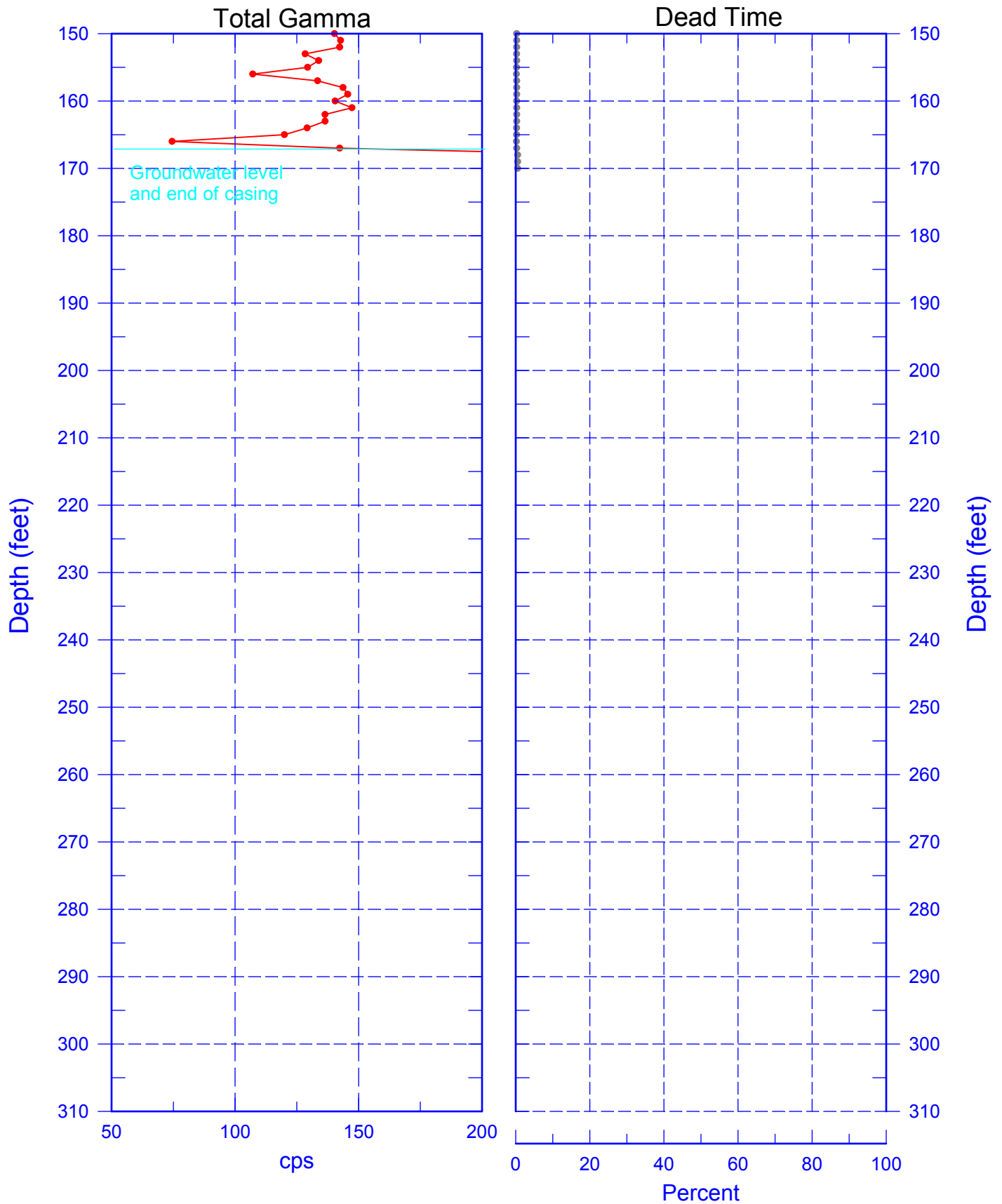
Total Gamma & Dead Time



Reference - Ground Surface

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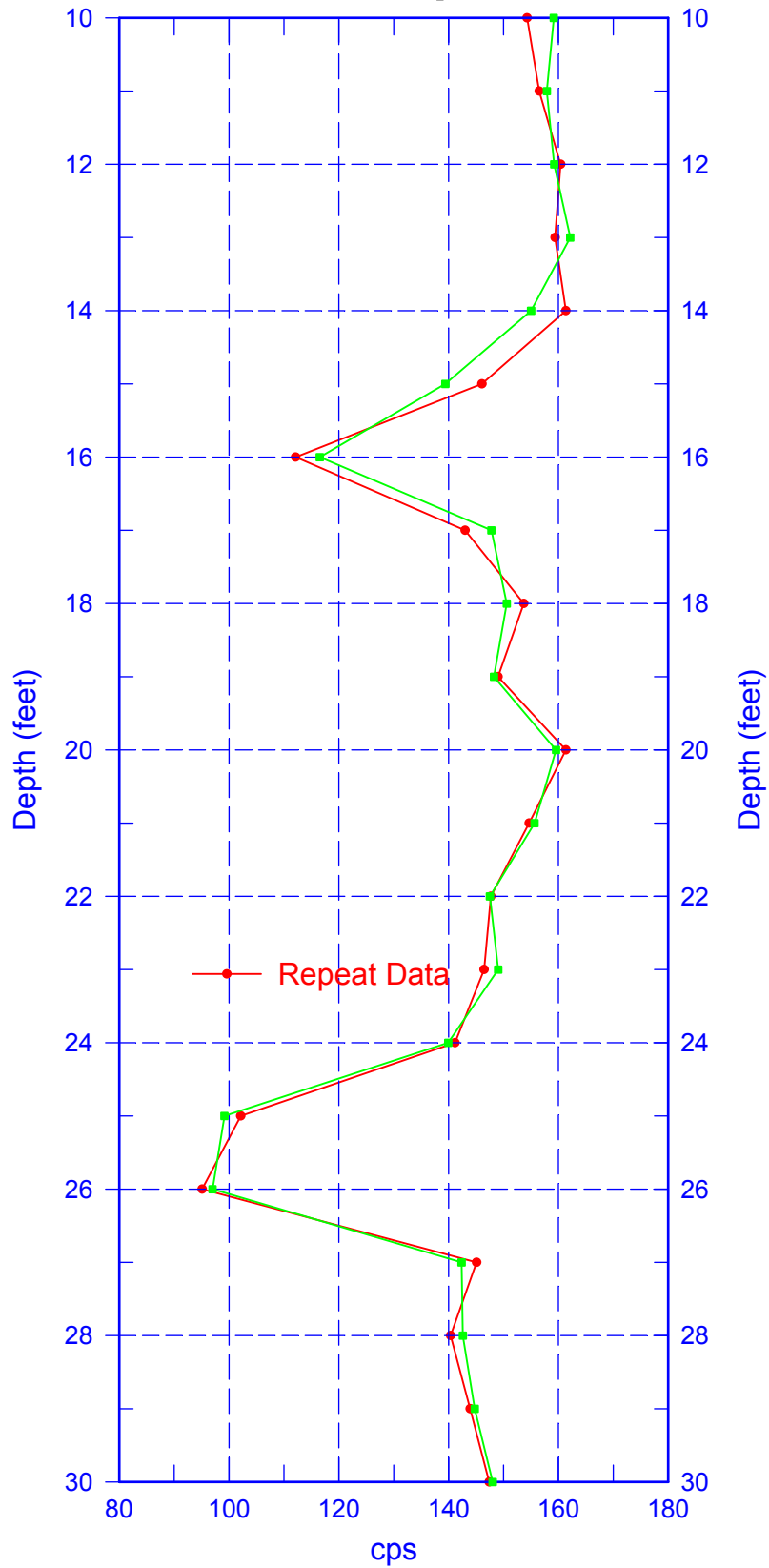
Total Gamma & Dead Time



Reference - Ground Surface

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Total Gamma Repeat Section



Reference - Ground Surface